

Requested Patent JP60182731

Title: SEMICONDUCTOR DEVICE

Abstracted Patent JP60182731

Publication Date: 1985-09-18

Inventor(s): KAWAGUCHI TAMOTSU

Applicant(s): TOSHIBA KK

Application Number: JP19840038086 19840229

Priority Number(s):

IPC Classification: H01L21/60

Equivalents:

**ABSTRACT:**

**PURPOSE:** To improve area efficiency by bringing the size of a semiconductor chip on the upper side to a slightly small size and each connecting a semiconductor chip on the lower side to a conductor through wireless bonding and the upper side chip to it through wire bonding in two kinds of the semiconductor chips, the backs thereof are fixed mutually.

**CONSTITUTION:** When the backs of semiconductor chips 14' and 16' of two kinds are fixed mutually by using adhesives 15, the size of the upper chip 16' is previously made slightly larger than that of the lower chip 14'. When the lower chip 14' is connected to split conductors 12 formed on the surface of a substrate 11, solder bumps 13 are shaped at both ends of the lower surface of the chip 14', and the bumps 13 are each fixed to the conductors 12 through a face down. Metallic wires 17 are used in the chip 16', and the chip 16' is connected to several conductor 12 through a face up. Accordingly, a semiconductor device with a large number of connecting conductors is obtained without magnifying the size of the chips.